

1 FILES HAVE ONE OR MORE ANSWERS, 66 FILES SEARCHED IN STNINDEX

L38 QUE L33 AND L34

=> d rank L38

'FULL' IS NOT VALID IN THE CURRENT FILE

This option is not valid in the current file. Enter the command without the option at the arrow prompt (=>). Or, first enter the file in which the saved item created. Then enter the command and option at an arrow prompt in the file.

=> d rank

F1 1 DGENE

=> file f1

COST IN U.S. DOLLARS

SINCE FILE	TOTAL
ENTRY	SESSION
24.75	87.01

FULL ESTIMATED COST

FILE 'DGENE' ENTERED AT 14:25:13 ON 14 MAY 2003  
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FILE LAST UPDATED: 9 MAY 2003 <20030509/UP>

DGENE CURRENTLY CONTAINS 3,563,592 BIOSEQUENCES

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KAILASH C. SRIVASTAVA

DEX 'ADISCTI, ADISINSIGHT, ADISNEWS, AGRICOLA, ANABSTR, AQUASCI, BIOBUSINESS, BIOCOMMERCE, BIOSIS, BIOTECHABS, BIOTECHDS, BIOTECHNO, CABA, CANCERLIT, CAPLUS, CEABA-VTB, CEN, CIN, CONFSCI, CROPB, CROPU, DDFB, DDFU, DGENE, DRUGB, DRUGLAUNCH, DRUGMONOG2, ...' ENTERED AT 17:06:25 ON 14 MAY 2003

19 FILES HAVE ONE OR MORE ANSWERS  
QUE 3-ISOPYLMALATE DEHYDRATASE OR BETA-ISOPROPYLMALATE DEHYDRATASE ORISOP  
OPYLMALATE ISOMERASE OR 3-ISOPROPYLMALATE HYDRO-LYASE OR ALPHA-ISOPROP  
YLMALATE ISOMERASE

61 FILES HAVE ONE OR MORE ANSWERS  
QUE INHIBIT? (5N) (COMPOUND OR MATTER OR COMPD OR SUBSTANCE OR MATERIAL OR  
CHEMICAL)

66 FILES HAVE ONE OR MORE ANSWERS  
QUE SCREEN? OR EVALUAT? OR ASSAY? OR TEST? OR QUANTI?

60 FILES HAVE ONE OR MORE ANSWERS  
QUE (ANTIBIOTIC OR ANTIBACTERIAL OR ANTIFUNGAL OR ANTIMICROBIAL OR FUNGICI  
D? OR FUNGISTATIC) (5N) COMPOUND

0 FILES HAVE ONE OR MORE ANSWERS  
QUE L1 AND L2

13 FILES HAVE ONE OR MORE ANSWERS,  
QUE (EC 4.2.1.33)

10 FILES HAVE ONE OR MORE ANSWERS,  
QUE L1 AND L6

0 FILES HAVE ONE OR MORE ANSWERS  
QUE L5 AND L7

2 FILES HAVE ONE OR MORE ANSWERS  
QUE L7 AND L3

> d rank

1 1 MEDLINE  
2 1 USPATFULL

> file f1-f2

> L9

10 2 L9

11 0 L10 AND L2

12 0 L10 AND L4

13 0 L7 AND L4

10 ANSWER 1 OF 2 MEDLINE

N 94171070 MEDLINE

N 94171070 PubMed ID: 8125330

I The LEU1 gene of Ustilago maydis.

U Rubin B P; Li D; Holloman W K

S Department of Microbiology, Cornell University Medical College, New York,  
NY 10021.

C GM42482 (NIGMS)

GM42548 (NIGMS)

O GENE, (1994 Mar 11): 140 (1) 131-5.

Journal code: 7706761. ISSN: 0378-1119.

Y Netherlands

T Journal; Article; (JOURNAL ARTICLE)

A English

S Priority Journals

S GENBANK-L20832

M 199404

D Entered STN: 19940420

Last Updated on STN: 19940420

Entered Medline: 19940414

B The nucleotide sequence of the Ustilago maydis LEU1 gene has been  
determined. It contains a continuous open reading frame predicted to  
encode a protein of 773 amino acids with a molecular mass of 83,234 Da.  
The protein is homologous to \*\*\*alpha\*\*\* - \*\*\*isopropylmalate\*\*\*  
\*\*\*isomerases\*\*\* from prokaryotes and eukaryotes, as well as to other  
members of a family of structurally related isomerases.

10 ANSWER 2 OF 2 USPATFULL

N 2003:78516 USPATFULL

I STAPHYLOCOCCUS AUREUS POLYNUCLEOTIDES AND SEQUENCES

QH 442.643

IN KUNSCH, CHARLES A., GAITHERSBURG, MD, UNITED STATES  
 CHOI, GIL A., ROCKVILLE, MD, UNITED STATES  
 BARASH, STEVEN C., ROCKVILLE, MD, UNITED STATES  
 DILLON, PATRICK J., GAITHERSBURG, MD, UNITED STATES  
 FANNON, MICHAEL R., SILVER SPRING, MD, UNITED STATES  
 ROSEN, CRAIG A., LAYTONSVILLE, MD, UNITED STATES  
 PI US 2003054436 A1 20030320  
 AI US 1997-781986 A1 19970103 (8)  
 PRAI US 1996-9861P 19960105 (60)  
 DT Utility  
 FS APPLICATION  
 LREP HUMAN GENOME SCIENCES INC, 9410 KEY WEST AVENUE, ROCKVILLE, MD, 20850  
 CLMN Number of Claims: 29  
 ECL Exemplary Claim: 1  
 DRWN 2 Drawing Page(s)  
 LN.CNT 13414

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AB The present invention provides polynucleotide sequences of the genome of Staphylococcus aureus, polypeptide sequences encoded by the polynucleotide sequences, corresponding polynucleotides and polypeptides, vectors and hosts comprising the polynucleotides, and \*\*\*assays\*\*\* and other uses thereof. The present invention further provides polynucleotide and polypeptide sequence information stored on computer readable media, and computer-based systems and methods which facilitate its use.

L14 0 (ALPHA-ISOPROPYLMALATE ISOMERASES) (5N) INHIBIT?  
 L15 0 (ALPHA-ISOPROPYLMALATE ISOMERASES) (5N) INHIBITOR  
 L16 0 (ALPHA-ISOPROPYLMALATE ISOMERASES) AND L4

L6 ANSWER 68 OF 70 BIOTECHDS COPYRIGHT 2003 THOMSON DERWENT AND  
ISI

AN 1991-08933 BIOTECHDS

TI Some properties of the leucine-biosynthesizing enzymes from *Candida maltosa*;

1-isopropylmalate-synthase, 3-isopropylmalate-dehydratase,  
3-isopropylmalate-dehydrogenase purification and characterization

AU Bode R; Birnbaum D

LO Ernst-Moritz-Arndt-Universitaet Greifswald, Fachrichtung Biologie,  
Institut fuer Biochemie, Jahnstrasse 15a, O-2200 Greifswald, Germany.

SO J.Basic Microbiol.; (1991) 31, 1, 21-26

CODEN: JBMIEQ

DT Journal

LA English

AN 1991-08933 BIOTECHDS

AB The enzymes of the leucine biosynthetic pathway in *Candida maltosa* L4  
were partially purified and their catalytic properties determined.

Maximum activity of the first enzyme, alpha-isopropylmalate  
(IPM)-synthase (1-isopropylmalate-synthase, EC-4.1.3.12), was observed at  
pH values between 7.5 and 8.8. The  $K_m$  values for alpha-ketoisovalerate  
and acetyl-CoA were 0.57 mM and 0.064 mM, respectively. Enzyme activity  
was \*\*\*inhibited\*\*\* specifically by L-leucine, and was strongly  
dependent on the presence of monovalent cations, preferably  $K^+$  (80 mM).

IPM-dehydratase ( \*\*\*3\*\*\* - \*\*\*isopropylmalate\*\*\* -

\*\*\*dehydratase\*\*\*, EC-4.2.1.33) activity showed a sharp optimum at pH  
8.5. The enzyme did not require cations for activity, and L-leucine,  
L-isoleucine and L-valine did not \*\*\*inhibit\*\*\* activity. The pH  
optimum of beta-IPM-dehydrogenase (3-isopropylmalate-dehydrogenase,  
EC-1.1.1.85) was 6.8, with 50% of the optimum activity expressed at pH  
5.8 and pH 7.4. Monovalent cations were not required for dehydrogenase  
activity, but divalent ions increased activity (preferably  $Mn^{2+}$  at 1 mM).  
Enzyme activity was \*\*\*inhibited\*\*\* by L-valine. (23 ref

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**IUBMB Enzyme Nomenclature**

## **EC 4.2.1.33**

**Common name:** 3-isopropylmalate dehydratase

**Reaction:** 3-isopropylmalate = 2-isopropylmaleate + H<sub>2</sub>O

**Other name(s):** β-Isopropylmalate dehydratase; isopropylmalate isomerase; α-isopropylmalate isomerase

**Systematic name:** 3-isopropylmalate hydro-lyase

**Comments:** The enzyme also hydrates the product to 3-hydroxy-4-methyl-3-carboxypentanoate, thus bringing about an interconversion between the two isomers.

**Links to other databases:** [BRENDA](#), [EXPASY](#), [KEGG](#), [WIT](#), CAS registry number: 37290-72-5

**References:**

1. Gross, S.R., Burns, R.O. and Umbarger, H.E. The biosynthesis of leucine. II. The enzymic isomerization of β-carboxy-β-hydroxyisocaproate and α-hydroxy-β-carboxyisocaproate. *Biochemistry* 2 (1963) 1046-1052.

[EC 4.2.1.33 created 1972, modified 1976]

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[Return to EC 4.3 home page](#)

[Return to EC 4 home page](#)

[Return to Enzymes home page](#)

[Return to IUBMB Biochemical Nomenclature home page](#)

